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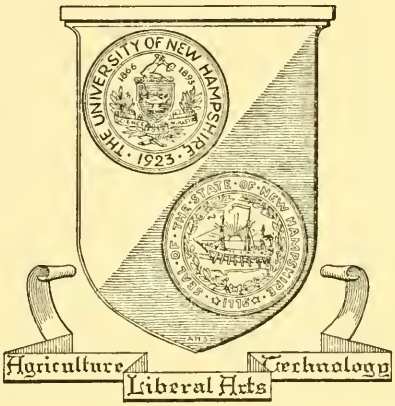


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Bulletin 301 December, 1937

THE UNIVERSITY OF NEW HAMPSHIRE
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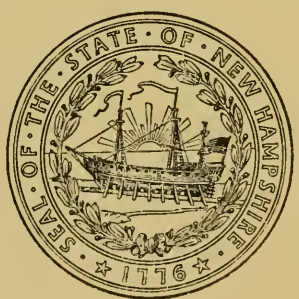
# Inspection of Commercial Fertilizers for 1937

MADE FOR THE

STATE DEPARTMENT OF AGRICULTURE




T. O. Smith and H. A. Davis

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# INSPECTION OF COMMERCIAL FERTILIZERS

## MADE FOR THE STATE DEPARTMENT OF AGRICULTURE

The inspection of commercial fertilizers reported in this bulletin was made under the direction of the Honorable Andrew L. Felker, Commissioner of Agriculture. The state inspector, Mr. Eugene D. Sanborn, collected samples of 103 brands of fertilizer materials which were offered for sale by dealers or had been delivered to consumers during the year ending June, 1937. The general character of the fertilizer materials collected is shown by the following classification:

| | |
|---|---|
| Complete fertilizers | 76 |
| Superphosphate (acid phosphate) | 8 |
| Nitrate of soda | 1 |
| Calnitro | 1 |
| Cyanamid | 1 |
| Castor pomace | 1 |
| Sulphate of ammonia | 1 |
| Muriate of potash | 2 |
| Ground bone | 6 |
| Tankage | 1 |
| Natural manures | 5 |
| | 103 |

## THE FERTILIZER LAW

The state official charged with the enforcement of the fertilizer law is the Commissioner of Agriculture. Copies of the law may be obtained from his office in Concord. All inquiries concerning the law and all matters relative to the registration of brands should be addressed to his office.

The purchaser's refusal to buy a fertilizer which does not conform to the law in every respect, will not only assist in the enforcement of the law but will at the same

time insure himself the protection of the law. If the buyer fails to assure himself that the legal requirements have been met, he accepts the fertilizer at his own risk. Whether or not the purchaser familiarizes himself with the complete text of the fertilizer law, he should not accept from the dealer any bag of fertilizer which is not tagged and guaranteed in compliance with the law. The law governing these matters follows:

"Every lot or parcel of commercial fertilizer or fertilizer material sold or offered or exposed for sale within this state shall be accompanied by a plainly printed statement, clearly and truly certifying the number of net pounds of fertilizer in the package, the name, brand or trademark under which the fertilizer is sold, the name and address of the manufacturer or importer, the location of the factory, and a chemical analysis stating the minimum percentage of nitrogen, of available phosphoric acid and of water soluble potash expressed in whole numbers.

"No fertilizer or fertilizer material containing the three essential fertilizing elements, nitrogen, phosphoric acid and potash may be sold or offered for sale if the total minimum plant food nutrients contained therein is less than fourteen per cent by weight, provided however that natural animal and bird manures shall be expected from the provisions of this section."

The chief purpose of the official inspection required by the fertilizer law is to protect the consumer against the misbranded products which would doubtless soon appear upon the market if the sale of fertilizer was not under state regulation. The value of a fertilizer depends mainly upon its content of available plant food, particularly nitrogen, phosphoric acid and potash. The presence of these constituents can only be determined by a chemical analysis. To insure that they are being furnished by the manufacturer in the guaranteed amounts, it is necessary that each brand of fertilizer offered for sale be officially

inspected and analyzed one or more times each year. When failure to meet the guarantee is proven by chemical analysis, the prosecution or seizure provisions of the law may be invoked. All of the samples reported in this bulletin were officially taken by an inspector appointed by the Commissioner of Agriculture. The chemical analyses were made by the official methods of the Association of Official Agricultural Chemists.

In Table I are tabulated the grades of complete fertilizers analyzed in this year's inspection, the number of brands found by the inspector in each grade, the average per cent of nitrogen, of available phosphoric acid, and of water soluble potash of the brands in each grade and the average retail price per ton.

**TABLE I.**

| Formula | Number of brands | Average per cent nitrogen | Average per cent available phosphoric acid | Average per cent water soluble potash | Average retail price per ton |
|---|---|---|---|---|---|
| 2—8—10 | 2 | 2.33 | 8.45 | 10.14 | 33.55 |
| 2—12—4 | 2 | 2.58 | 11.97 | 4.68 | 36.50 |
| 3—10—4 | 6 | 3.06 | 10.29 | 4.05 | 32.17 |
| 3—10—6 | 1 | 3.04 | 10.00 | 6.18 | 35.75 |
| 4—8—4 | 9 | 4.07 | 8.20 | 4.03 | 34.46 |
| 4—8—7 | 3 | 4.33 | 8.23 | 7.48 | 37.00 |
| 4—8—8 | 3 | 4.13 | 8.63 | 7.95 | 30.30 |
| 4—8—10 | 8 | 4.02 | 8.15 | 9.81 | 38.23 |
| 4—12—4 | 2 | 4.19 | 12.03 | 4.42 | 27.60 |
| 4—12—6 | 1 | 4.10 | 12.44 | 5.72 | 39.15 |
| 4—16—4 | 1 | 4.26 | 15.63 | 4.00 | 38.00 |
| 4—16—20 | 1 | 4.23 | 18.30 | 20.00 | 40.80 |
| 5—7—3 | 1 | 5.16 | 8.82 | 3.06 | 110.00 |
| 5—8—7 | 10 | 4.95 | 8.24 | 6.94 | 38.75 |
| 5—8—10 | 1 | 4.70 | 8.20 | 9.17 | 41.60 |
| 5—10—4 | 1 | 5.01 | 10.21 | 4.04 | —— |
| 6—8—6 | 1 | 6.22 | 8.55 | 6.05 | 29.20 |
| 7—5—3 | 1 | 6.47 | 5.11 | 2.50 | 70.00 |
| 7—6—6 | 6 | 6.79 | 6.42 | 6.00 | 38.67 |
| 7—8—5 | 1 | 6.73 | 8.14 | 5.00 | 40.00 |
| 8—5—8 | 1 | 8.53 | 6.74 | 8.65 | 58.00 |
| 8—6—2 | 1 | 7.52 | 6.61 | 2.08 | 53.00 |
| 8—8—8 | 1 | 8.09 | 7.84 | 9.08 | 50.00 |
| 8—16—14 | 3 | 7.91 | 16.83 | 13.01 | 49.74 |
| 8—16—16 | 4 | 7.99 | 15.89 | 16.05 | 45.93 |
| 8—16—20 | 1 | 7.72 | 16.40 | 19.00 | 59.05 |
| 8—24—8 | 1 | 8.12 | 24.82 | 8.17 | 45.20 |
| 9—6—6 | 1 | 8.61 | 6.55 | 6.17 | 46.00 |
| 12—4—4 | 1 | 12.32 | 4.45 | 4.42 | 33.80 |
| 12—16—12 | 1 | 12.49 | 16.00 | 13.04 | 53.20 |

## CONFORMITY TO GUARANTEE

None of the brands was deficient in all of the three guaranteed constituents, nitrogen, available prosphoric acid, and water soluble potash. Fourteen brands were deficient in two of the three constituents, one in nitrogen and available phosphoric acid, 12 in nitrogen and potash, and one in available phosphoric acid and potash.

Twenty-five brands were found to contain less than the guaranteed amount of nitrogen. The greatest deficiency was 0.59 per cent. The average of the other 24 nitrogen deficiencies was 0.23 per cent.

Nine brands failed to meet the guarantee in available phosphoric acid. One brand was deficient 0.89 per cent. The average of the other eight deficiencies was 0.22 per cent.

Twenty-two brands contained less potash than the guarantee. The greatest deficiency was 3.03 per cent. The average of the other 21 deficiencies was 0.50 per cent.

In the tabulation of the analyses in the following pages deficiencies of one-fourth of one per cent or more are shown in bold-faced type. The manufacturers are arranged alphabetically. The brand name is listed alphabetically or numerically by formula under the manufacturer.

| | Nitrogen | | Phosphoric Acid | | | | Potash | |
|---|---|---|---|---|---|---|---|---|
| | | | Total | | Available | | | |
| | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found |
| American Agricultural Chemical Co. North Weymouth, Mass. | | | | | | | | |
| AA Complete Manure with 10% Potash 4-8-10 | 4.00 | 4.03 | ..... | 9.20 | 8.00 | 8.58 | 10.00 | **9.60** |
| AA Corn Favorite 3-10-4 | 3.00 | 3.09 | ..... | 11.11 | 10.00 | 10.31 | 4.00 | 4.04 |
| AA Double Strength Fertilizer with 20% Potash 8-16-20 | 8.00 | **7.72** | ..... | 16.74 | 16.00 | 16.40 | 20.00 | **19.00** |
| AA Fertilizer 4-8-8 | 4.00 | 4.02 | ..... | 9.41 | 8.00 | 8.74 | 8.00 | 8.05 |
| AA Monarch Fertilizer 4-8-4 | 4.00 | 3.91 | ..... | 8.45 | 8.00 | 8.00 | 4.00 | **3.65** |
| AA Potato and Vegetable Fertilizer 5-8-7 | 5.00 | 5.00 | ..... | 8.37 | 8.00 | 7.88 | 7.00 | **6.72** |
| AA Prolific 10% Potash Fertilizer 2-8-10 | 2.00 | 2.29 | ..... | 8.81 | 8.00 | 8.39 | 10.00 | **9.10** |
| AA Superphosphate 16% | ..... | ..... | ..... | 18.12 | 16.00 | 16.67 | ..... | ..... |
| AA Top Dresser 7-6-6 | 7.00 | 6.86 | ..... | 6.75 | 6.00 | 6.47 | 6.00 | 6.07 |
| Agrico for Arrostook with 10% Potash 5-8-10 | 5.00 | **4.70** | ..... | 8.98 | 8.00 | 8.20 | 10.00 | **9.17** |
| Agrico for Corn 3-10-6 | 3.00 | 3.04 | ..... | 11.13 | 10.00 | 10.00 | 6.00 | 6.18 |
| Agrico for Corn 4-12-6 | 4.00 | 4.10 | ..... | 12.99 | 12.00 | 12.44 | 6.00 | **5.72** |
| Agrico for Fruit 9-6-6 | 9.00 | **8.61** | ..... | 6.80 | 6.00 | 6.55 | 6.00 | 6.17 |
| Agrico for New England 4-8-10 | 4.00 | 4.01 | ..... | 8.84 | 8.00 | 8.04 | 10.00 | 10.00 |
| Agrico for Pastures and Top Dressing 7-6-6 | 7.00 | **6.75** | ..... | 6.72 | 6.00 | 6.30 | 6.00 | 6.21 |
| Agrico for Potatoes and Vegetables 5-8-7 | 5.00 | 4.91 | ..... | 8.90 | 8.00 | 8.06 | 7.00 | 6.84 |

| | Nitrogen | | Phosphoric Acid | | | | Potash | |
|---|---|---|---|---|---|---|---|---|
| | | | Total | | Available | | | |
| | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found |
| Bowker's All Round Fertilizer 3-10-4 | 3.00 | 3.08 | ..... | 11.17 | 10.00 | 10.75 | 4.00 | 4.24 |
| Bowker's Market Garden Fertilizer 4-8-4 | 4.00 | 4.02 | ..... | 9.23 | 8.00 | 8.83 | 4.00 | 4.03 |
| Bowker's Stockbridge Potato and Vegetable Manure 4-8-10 | 4.00 | 3.91 | ..... | 8.84 | 8.00 | 8.14 | 10.00 | 9.55 |
| Bradley's XL Fertilizer 3-10-4 | 3.00 | 3.01 | ..... | 10.70 | 10.00 | 9.69 | 4.00 | 4.02 |
| Ground Bone | 2.47 | 2.20 | 23.00 | 24.85 | ..... | 15.23 | ..... | ..... |
| Ground Tankage | 7.40 | 7.50 | 9.15 | 10.60 | ..... | 7.00 | ..... | ..... |
| Pulverized Sheep and Goat Manure | 1.23 | 1.23 | 1.00 | 1.14 | ..... | 1.05 | 2.00 | 2.87 |
| American Cyanamid Co. Niagara Falls, Canada | | | | | | | | |
| Aero Cyanamid Granular | 21.00 | 20.79 | ..... | ..... | ..... | ..... | ..... | ..... |
| Apothecaries Hall Co. Waterbury, Conn. | | | | | | | | |
| Bone Meal | 2.47 | 2.48 | 23.00 | 25.32 | ..... | 15.10 | ..... | ..... |
| Castor Pomace | 4.50 | 5.49 | ..... | ..... | ..... | ..... | ..... | ..... |
| Liberty High Grade Corn 2-12-4 | 2.00 | 2.54 | ..... | 12.48 | 12.00 | 12.04 | 4.00 | 4.67 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Liberty High Grade Market Garden 5-8-7 | 5.00 | 5.14 | ..... | 8.84 | 8.00 | 8.58 | 7.00 | **6.68** |
| Liberty Market Garden Special 4-8-4 | 4.00 | 4.33 | ..... | 9.04 | 8.00 | 8.52 | 4.00 | 4.00 |
| Liberty Onion Special 4-8-7 | 4.00 | 4.75 | ..... | 9.71 | 8.00 | 8.15 | 7.00 | 8.20 |
| Liberty Potato and Vegetable 2-8-10 | 2.00 | 2.36 | ..... | 8.68 | 8.00 | 8.50 | 10.00 | 11.18 |
| Liberty Top Dresser for Grass and Grain 8-8-8 | 8.00 | 8.09 | ..... | 8.14 | 8.00 | 7.84 | 8.00 | 9.08 |
| Pulverized Sheep and Goat Manure | 1.25 | 1.47 | 0.50 | 1.00 | ..... | 0.96 | 2.00 | 2.69 |
| **Armour Fertilizer Works<br>Carteret, N. J.** | | | | | | | | |
| Armour's Big Crop Fertilizer 4-8-4 | 4.00 | 3.83 | ..... | 8.44 | 8.00 | 7.94 | 4.00 | 4.00 |
| Armour's Big Crop Fertilizer 4-8-10 | 4.00 | 4.00 | ..... | 8.56 | 8.00 | 7.90 | 10.00 | 10.02 |
| Armour's Big Crop Fertilizer 4-16-4 | 4.00 | 4.26 | ..... | 16.71 | 16.00 | **15.63** | 4.00 | 4.00 |
| Armour's Big Crop Fertilizer 5-8-7 | 5.00 | 4.86 | ..... | 8.85 | 8.00 | 8.33 | 7.00 | **6.65** |
| Armour's Big Crop Fertilizer 7-6-6 | 7.00 | 6.89 | ..... | 6.50 | 6.00 | 6.20 | 6.00 | 6.06 |
| Armour's Big Crop Superphosphate 16% | ..... | ..... | ..... | 16.87 | 16.00 | 16.07 | ..... | ..... |
| Armour's Fertilizer 4-8-8 | 4.00 | 4.05 | ..... | 9.07 | 8.00 | 8.53 | 8.00 | **6.96** |
| Armour's Fertilizer 8-16-16 | 8.00 | 8.02 | ..... | 15.70 | 16.00 | **15.48** | 16.00 | 16.08 |
| Sulphate of Ammonia | 20.50 | 20.82 | ..... | ..... | ..... | ..... | ..... | ..... |
| **Atlantic States Fertilizer Co.<br>Haverhill, Mass.** | | | | | | | | |
| BAA-BAA Sheep Manure | 2.50 | 2.90 | 1.50 | 1.79 | ..... | 1.72 | 3.50 | 3.90 |
| **Consolidated Rendering Co.<br>Boston, Mass.** | | | | | | | | |
| Competitive Brand 8-16-16 | 8.00 | 7.93 | ..... | 16.53 | 16.00 | 16.04 | 16.00 | 16.28 |

| | Nitrogen | | Phosphoric Acid | | | | Potash | |
|---|---|---|---|---|---|---|---|---|
| | | | Total | | Available | | | |
| | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found |
| Corenco 3-10-4 Animal Brand | 3.00 | 3.00 | ..... | 10.62 | 10.00 | 10.39 | 4.00 | 3.86 |
| Corenco 4-8-4 Corn and Vegetable | 4.00 | 4.05 | ..... | 8.50 | 8.00 | 8.10 | 4.00 | 4.05 |
| Corenco 4-8-7 Market Garden | 4.00 | 4.04 | ..... | 8.82 | 8.00 | 8.42 | 7.00 | 7.19 |
| Corenco 4-8-10 Potato Grower | 4.00 | 4.01 | ..... | 8.38 | 8.00 | 8.22 | 10.00 | 10.03 |
| Corenco 5-8-7 General Crop Manure | 5.00 | 5.01 | ..... | 8.40 | 8.00 | 8.28 | 7.00 | 7.11 |
| Corenco 7-6-6 Complete Fruit and Top Dressing | 7.00 | 6.81 | ..... | 6.55 | 6.00 | 6.45 | 6.00 | 5.82 |
| Corenco Ground Bone | 2.47 | 2.48 | 23.00 | 25.05 | ..... | 17.04 | ..... | ..... |
| Corenco Sheep Manure | 1.25 | 1.40 | 1.00 | 1.01 | ..... | 0.92 | 2.00 | 2.76 |
| New England 8-6-2 Putting Green Special | 8.00 | 7.52 | ..... | 7.33 | 6.00 | 6.61 | 2.00 | 2.08 |
| Superphosphate 16% | ..... | ..... | ..... | 17.04 | 16.00 | 16.92 | ..... | ..... |
| Eastern States Farmers' Exchange Springfield, Mass. | | | | | | | | |
| Eastern States 4-8-8 Fertilizer | 4.00 | 4.32 | ..... | 9.11 | 8.00 | 8.62 | 8.00 | 8.84 |
| Eastern States 4-12-4 Fertilizer | 4.00 | 4.35 | ..... | 12.92 | 12.00 | 12.00 | 4.00 | 4.62 |
| Eastern States 4-16-20 Fertilizer | 4.00 | 4.23 | ..... | 18.60 | 16.00 | 18.30 | 20.00 | 20.00 |
| Eastern States 6-8-6 Fertilizer | 6.00 | 6.22 | ..... | 8.98 | 8.00 | 8.55 | 6.00 | 6.05 |
| Eastern States 8-16-16 Fertilizer | 8.00 | 8.29 | ..... | 15.28 | 16.00 | 15.11 | 16.00 | 16.69 |
| Eastern States 8-24-8 Fertilizer | 8.00 | 8.12 | ..... | 25.25 | 24.00 | 24.82 | 8.00 | 8.17 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Eastern States 12-4-4 Fertilizer | 12.00 | 12.32 | ..... | 4.54 | 4.00 | 4.45 | 4.00 | 4.42 |
| Eastern States 12-16-12 Fertilizer | 12.00 | 12.49 | ..... | 16.16 | 16.00 | 16.00 | 12.00 | 13.04 |
| Eastern States Calnitro | 20.50 | 20.52 | ..... | ..... | ..... | ..... | ..... | ..... |
| Eastern States Muriate of Potash | ..... | ..... | ..... | ..... | ..... | ..... | 60.00 | 60.80 |
| Eastern States Superphosphate 20% Granular | ..... | ..... | 20.50 | 21.30 | 20.00 | 21.10 | ..... | ..... |
| Eastern States Superphosphate 40% Double Granular | ..... | ..... | 40.50 | 42.95 | 40.00 | 41.01 | ..... | ..... |
| **Thomas W. Emerson Co.<br>Boston, Mass.** | | | | | | | | |
| English Formula Lawn and Garden Dressing 5-7-3 | 5.00 | 5.16 | ..... | 12.28 | 7.00 | 8.82 | 3.00 | 3.06 |
| **International Agricultural Corp.<br>Woburn, Mass.** | | | | | | | | |
| International 3-10-4 Fertilizer | 3.00 | 3.18 | ..... | 10.48 | 10.00 | 10.25 | 4.00 | 4.51 |
| International 4-8-4 Fertilizer | 4.00 | 4.07 | ..... | 8.31 | 8.00 | 8.15 | 4.00 | 3.64 |
| International 4-8-7 Fertilizer | 4.00 | 4.19 | ..... | 8.28 | 8.00 | 8.12 | 7.00 | 7.05 |
| International 4-8-10 Fertilizer | 4.00 | 4.02 | ..... | 8.34 | 8.00 | 8.04 | 10.00 | 9.25 |
| International 5-8-7 Fertilizer | 5.00 | 4.82 | ..... | 8.66 | 8.00 | 8.52 | 7.00 | 7.00 |
| International 7-6-6 Fertilizer | 7.00 | 6.59 | ..... | 6.90 | 6.00 | 6.69 | 6.00 | 6.02 |
| International 8-16-14 Fertilizer | 8.00 | 7.87 | ..... | 17.49 | 16.00 | 16.93 | 14.00 | 13.27 |
| International 8-16-16 Fertilizer | 8.00 | 7.71 | ..... | 17.31 | 16.00 | 16.93 | 16.00 | 15.16 |
| Caribee Green and Fairway Fertilizer 7-5-3 | 7.00 | 6.47 | ..... | 5.33 | 5.00 | 5.11 | 3.00 | 2.50 |
| International Caribee Sheep Manure | 1.02 | 1.35 | ..... | 1.57 | 0.50 | 1.48 | 2.00 | 2.31 |
| International 16% Superphosphate | ..... | ..... | ..... | 16.73 | 16.00 | 16.43 | ..... | ..... |
| International 20% Superphosphate | ..... | ..... | ..... | 21.70 | 20.00 | 21.34 | ..... | ..... |

| | Nitrogen | | Phosphoric Acid | | | | Potash | |
|---|---|---|---|---|---|---|---|---|
| | | | Total | | Available | | | |
| | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found | Guaranteed | Found |
| Merrimack Farmers' Exchange<br>Concord, N. H. | | | | | | | | |
| Merrimack Brand 3-10-4 | 3.00 | 3.02 | ..... | 10.59 | 10.00 | 10.37 | 4.00 | **3.61** |
| Merrimack Brand 4-8-4 | 4.00 | 4.08 | ..... | 8.47 | 8.00 | 8.16 | 4.00 | 4.02 |
| Merrimack Brand 4-8-10 | 4.00 | 4.00 | ..... | 8.42 | 8.00 | 8.20 | 10.00 | 10.03 |
| Merrimack Brand 5-8-7 | 5.00 | 5.01 | ..... | 8.64 | 8.00 | 8.44 | 7.00 | 7.00 |
| Merrimack Brand 7-6-6 Top Dressing | 7.00 | 6.87 | ..... | 6.47 | 6.00 | 6.38 | 6.00 | 5.81 |
| Merrimack Brand 7-8-5 Complete Fruit | 7.00 | **6.73** | ..... | 8.56 | 8.00 | 8.14 | 5.00 | 5.00 |
| Merrimack Brand 8-16-14 | 8.00 | 7.77 | ..... | 17.88 | 16.00 | 17.42 | 14.00 | **10.97** |
| N. V. Potash Export My.<br>New York, N. Y. | | | | | | | | |
| Muriate of Potash | ..... | ..... | ..... | ..... | ..... | ..... | 50.00 | 50.20 |
| John Reardon & Sons Co.<br>Cambridge, Mass. | | | | | | | | |
| Rearco Ground Bone | 2.47 | 2.80 | 22.88 | 25.00 | ..... | 15.54 | ..... | ..... |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Rogers & Hubbard Co.<br>Portland, Conn.** | | | | | | | | |
| All Soils All Crops Fertilizer 4-8-4 | 4.00 | 4.05 | ..... | 9.05 | 8.00 | 8.00 | 4.00 | 4.33 |
| Ground Bone | 2.47 | 2.63 | 22.85 | 23.50 | ..... | 15.38 | ..... | ..... |
| Hubbard's Corn and Grain Fertilizer 2-12-4 | 2.00 | 2.61 | ..... | 12.99 | 12.00 | 11.89 | 4.00 | 4.69 |
| Hubbard's Potato Fertilizer 5-8-7 | 5.00 | 5.12 | ..... | 9.03 | 8.00 | 8.08 | 7.00 | 7.18 |
| Hubbard's Superphosphate | ..... | ..... | ..... | 16.58 | 16.00 | 16.46 | ..... | ..... |
| Oats and Top Dressing | 8.00 | 8.53 | 8.00 | 8.04 | 5.00 | 6.74 | 8.00 | 8.65 |
| Red H Brand 4-8-4 | 4.00 | 4.31 | ..... | 9.12 | 8.00 | 8.06 | 4.00 | 4.58 |
| Red H Brand 4-8-10 | 4.00 | 4.21 | ..... | 8.99 | 8.00 | 8.07 | 10.00 | 10.02 |
| Red H Brand 5-8-7 | 5.00 | 5.19 | ..... | 8.92 | 8.00 | 8.10 | 7.00 | 7.24 |
| Red H Brand 8-16-14 | 8.00 | 8.10 | ..... | 16.48 | 16.00 | 16.14 | 14.00 | 14.80 |
| **Solvay Process Co.<br>Hopewell, Va.** | | | | | | | | |
| Arcadian Nitrate of Soda | 16.00 | 16.13 | ..... | ..... | ..... | ..... | ..... | ..... |
| **Swift & Co.<br>Baltimore, Md.** | | | | | | | | |
| Bone Meal Fertilizer | 2.47 | 2.98 | 23.00 | 25.05 | ..... | 15.82 | ..... | ..... |
| Roselawn Special Plant Food 5-8-7 | 5.00 | 4.41 | ..... | 8.98 | 8.00 | 8.17 | 7.00 | 7.00 |
| Vigoro for Lawns, Flowers, Vegetables, Shrubs and Trees | 4.00 | 4.03 | ..... | 13.11 | 12.00 | 12.05 | 4.00 | 4.21 |
| **Tennessee Corporation<br>New York, N. Y.** | | | | | | | | |
| Loma | 5.00 | 5.01 | ..... | 10.42 | 10.00 | 10.21 | 4.00 | 4.04 |

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